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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/454,057	12/02/1999	FRANK M.G. DOERENBERG	543-98-015	3311

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JEANNE C SUCHODOLSKI  
ALLIEDSIGNAL INC  
PO BOX 2245  
101 COLUMBIA ROAD  
MORRISTOWN, NJ 07962

EXAMINER

NGUYEN, CHAU T

ART UNIT	PAPER NUMBER
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2152

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/454,057

Applicant(s)

DOERENBERG ET AL.

Examiner

Chau Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 December 1999.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-34 are presented for examination.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 16, 30, and 34 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Games et al., U.S. Patent No 3,755,628.

4. As to claim 1, Games discloses a network topology backplane bus architecture comprising:

a plurality of independent data communication lines (col. 3, lines 38-60 and Fig.

2: three channels designated A, B, and C);

a plurality of processing nodes sharing the independent data communication lines for data communication (col. 3, lines 38-60 and Fig. 2: communication units J, K, L and M, and each unit links to three channels);

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one of the processing nodes transmitting and receiving on a first subset of the data communication lines and receiving on a second subset of the data communication lines (col. 3, lines 38-60, col. 5, line 24 – col. 6, line 67, and Fig. 3) ; and

another of the processing nodes transmitting and receiving on the second subset of the data lines and receiving on the first subset of the data lines (col. 3, lines 38-60, col. 5, line 24 – col. 6, line 67, and Fig. 3).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-15, 17-29, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Games et al. as discussed above and further in view of Baker et al., U.S. Patent No. 5,325,517.

7. As to claims 2-3, Games discloses the limitations as discussed above. However, Games does not disclose ones of the independent data communication lines comprise a first independent data communication network and different ones of the independent

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data communication lines comprise a second independent data communication network. In the same field of endeavor, Baker discloses a prior art IBM System/88 module, plural modules interconnected by high speed data interconnections and plural modules interconnected via a network in a fault tolerant environment (col. 4, line 66 – col. 5, line 2, and col. 22, lines 11-67). Thus, it would have been obvious to one of the ordinary skill in the art at the time of the invention was made to combine the teaching of Games and Baker to include ones of the independent data communication lines comprise a first independent data communication network and different ones of the independent data communication lines comprise a second independent data communication network in order to share information.

8. As to claim 4, Games and Baker (Games-Baker) disclose the one of the processing nodes transmitting and receiving on a first subset of the data communication lines utilizes the first subset of the data communication lines for local communication within the processing node (Baker, col. 23, line 8 – col. 24, line 36).

9. As to claim 5, Games-Baker disclose one of the processing nodes transmitting and receiving on a first subset of the data communication lines further utilizes the first subset of the data communication lines for broadcasting transmissions to another of the processing nodes (Games, col. 5, line 24 – 6, line 67, and Fig. 3 and 5).

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10. As to claim 6, Games-Baker disclose one of the processing nodes transmitting and receiving on a first subset of the data communication lines further utilizes the first subset of the data communication lines for receiving data transmission from another of the processing nodes (Games, col. 5, line 24 – 6, line 67, and Fig. 3 and 5).

11. As to claim 7, Games-Baker disclose one of the processing nodes transmitting and receiving on a first subset of the data communication lines is one of a plurality of the processing nodes transmitting and receiving on the first subset of the data communication lines (Games, col. 5, line 24 – 6, line 67, and Fig. 3 and 5).

12. As to claim 8, Games-Baker disclose each of plurality of processing nodes transmitting and receiving on the first subset of the data communication lines are co-located in a first resource enclosure (Baker, col. 5, lines 15-18, col. 18, line 66 – col. 19, line 33, col. 27, line 22 – col. 28, line 66, and col. 46, line 66 – col. 47, line, 11 and Fig. 7-9; units (processing nodes) may reside within a single module enclosure in a fault tolerant system).

13. As to claim 9, Games-Baker disclose each of plurality of processing nodes transmitting and receiving on the first subset of the data communication lines time-share the data communication lines with others of the plurality of processing nodes transmitting and receiving on the first subset of the data communication lines (Games, col. 4, line 57 – col. 5, line 23).

14. As to claim 10, Games-Baker disclose each of plurality of processing nodes transmitting and receiving on the first subset of the data communication lines time-shares the data communication lines in synchronization with others of the plurality of processing nodes transmitting and receiving on the first subset of the data communication lines (Games, Abstract and col. 4, line 57 – col. 5, line 23).

15. As to claim 11, Game-Baker disclose the processing node transmitting and receiving on the second subset of the data lines and receiving on the first subset of the data lines utilizes the second subset of the data communication lines for local communication with the processing node (Baker, col. 23, line 8 – col. 24, line 36).

16. As to claim 12, Game-Baker disclose the processing node transmitting and receiving on the second subset of data communication lines further utilizes the second subset of the data communication lines for broadcasting transmissions to another of the processing nodes (Games, col. 5, line 24 – 6, line 67, and Fig. 3 and 5).

17. As to claim 13, Games-Baker disclose one of the processing nodes supports different ones of flight critical functions (Games, col. 3, lines 39-60).

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18. As to claim 14, Games-Baker disclose one or more of the processing nodes supporting one of the flight critical functions is duplicated in one or more additional ones of the processing nodes (Games, col. 3, lines 39-60).

19. As to claim 15, Games-Baker disclose one of the processing nodes supporting the one of the flight critical functions is located in a first resource enclosure; and at least one of the additional processing nodes supporting the one of the flight critical functions is located in a physically isolated second resource enclosure (Baker, col. 5, lines 15-18, col. 18, line 66 – col. 19, line 33, col. 27, line 22 – col. 28, line 66, and col. 46, line 66 – col. 47, line, 11 and Fig. 7-9).

20. Claims 16-34 are corresponding to network topology and method claims that have the similar limitations described in claims 1-16; therefore, they are rejected under the same rational.



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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau Nguyen whose telephone number is (703)305-4639. The Examiner can normally be reached on Monday-Friday from 7:30am to 4:30pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mark Rinehart, can be reached at (703) 305-4815.

The fax phone numbers for the organization where this application is assigned are as follows:

(703) 746-7238 (After Final Communications only)

(703) 746-7239 (Official Communications)

(703) 746-7240(for Official Status Inquiries, Draft Communications only)

Inquiries of a general nature relating to the general status of this application or proceeding should be directed to the 2100 Group receptionist whose telephone number is (703) 305-3900.

Chau Nguyen  
Patent Examiner  
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A handwritten signature in black ink, appearing to read 'Le Hien Luu', with a long horizontal line extending to the right.

LE HIEN LUU  
PRIMARY EXAMINER